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(57) Abstract

A system and method for electronically processing loan data uses a graphical user interface that imports data from a loan origination software (LOS) system onto a local terminal and transfers the data to a remote location for processing. The loan imported from the LOS system is initially validated for completeness before being transferred to the remote location. The loan data is processed to generate a loan price and multiple pricing scenarios for the loan. This information is sent back to the local terminal for acceptance. Once accepted, the loan can be rate-locked for a specified period of time.

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SYSTEM AND METHOD FOR PROCESSING LOANS

Background of the Invention

The present invention relates generally to loan processing systems and, more particularly, to a system and method for processing loan data using a graphical user interface to import data from a loan origination system and transfer the data to a remote server for processing.

Currently, there is an increasing demand on lending institutions to process loans. This demand is presumably a result of the rising number of people applying for home mortgage loans, more favorable refinancing terms, automobile loans, credit card consolidation loans, and other types of loans to purchase products or services. Typically, the loan approval process requires a considerable amount of time involving extensive research of a borrower's financial history, credit rating, and other variables. This time involvement is certainly significant for mortgage loan approval.

Traditional mortgage transactions typically begin with a consumer approaching a mortgage broker for a loan. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form. The broker enters this data into various loan origination software (LOS) systems for storage and printing purposes. Once the data entry is complete, the broker assembles a credit package and sends it to one or several lenders for consideration. This package may include the loan application, a credit report obtained by the broker, documentation regarding the borrower's income, employment and assets, and an appraisal of the property to be purchased/refinanced.

Upon receiving the package, one of the lender's underwriters reviews it. The underwriter makes a decision to approve or deny the loan request based on the borrower's credit worthiness, capacity to pay, and collateral. Once the underwriter has reviewed these criteria, he sends a notice to the broker regarding loan approval. If the loan is denied, the underwriter sends an explanation for this decision. The underwriter may also "suspend" the loan, meaning they will withhold final judgment until additional documentation has been provided. Alternatively, the underwriter may approve the loan and inform the broker of this decision.

If the loan is approved, the broker calculates the loan price offered by the lender. This calculation involves reviewing a rate sheet received daily from the lender. This rate sheet offers a standard price based on the loan's interest rate along with various pricing adjustments based on particular loan categories. After reviewing the rate sheet, the broker calls the lender's "ratelock desk." He describes the loan's characteristics to a ratelock desk member who "locks in the price" for a particular period of time and sends the broker a ratelock confirmation. Once the loan is approved and ratelocked, the broker works with a document preparation company to prepare the closing loan documents. Subsequently, the broker delivers the closing loan documents to an escrow company for execution by the borrower(s). This entire process generally takes at least six weeks.

The traditional mortgage loan process described above is very cumbersome. Consequently, many investors have developed software-based systems that automate certain stages of the loan approval process. These systems include Government Sponsored Entity (GSE) automated underwriting systems (*e.g.*, Freddie Mac's Loan Prospector™ and Fannie Mae's Desktop Underwriter™).

A mortgage transaction involving the aforementioned GSE automated underwriting systems begins in the same manner as the traditional process--a consumer approaching a mortgage broker in need of a loan. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form. Once the application is complete, the broker assembles a credit package and sends it to a lender. This package may include the loan application, a credit report obtained by the broker, documentation regarding the borrower's income, employment and assets, and án appraisal of the property to be purchased/refinanced.

At this stage in the loan approval process, the GSE automated underwriting system becomes involved. Upon receiving the credit package, the lender enters loan data into the GSE automated underwriting system software installed on their local workstation. The loan data is processed through an automated underwriting engine which provides a quick loan approval decision and generates documentation requirements for the loan. Once the automated underwriting engine processes the loan, the lender sends a notice to the broker

regarding loan approval. If the loan is approved, the broker calculates the loan price being offered by the lender. This calculation involves reviewing a rate sheet received daily from the lender. After reviewing the rate sheet, the broker calls the lender's "ratelock desk" and describes the loan's characteristics to a ratelock desk member who "locks in the price" for a particular period of time. The ratelock desk sends confirmation to the broker for the ratelock price. Once the loan has been approved and ratelocked, the broker works with a document preparation company to prepare the closing loan documents. Subsequently, the broker delivers the prepared closing documents to an escrow company for execution by the borrower(s). Although parts of the GSE system loan approval process are automated, the process still requires a significant amount of human involvement and cost. Therefore, it is desirable to have a complete automated loan approval system and method that provides fast and accurate loan approval decisions at a minimal cost.

Summary of the Invention

A system and method consistent with the present invention provides an improved loan processing system as compared to both the traditional and the GSE loan processing systems. The improved loan processing system described herein begins with a consumer approaching a mortgage broker for a loan, similar to the initial stages of the traditional and GSE loan processing systems. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form and entered into various LOS systems for the storage and printing purposes.

At this stage, the improved loan processing system differs from the traditional and GSE systems in a variety of ways. First, while the GSE systems generally reside on lenders' workstations, the improved loan processing system resides on brokers' workstations. Moreover, the improved loan processing system has the ability to import data from select LOS systems. Thus, a broker can electronically import single and multiple loan files from their LOS system into their improved loan processing system, which then validates the loan files for completeness, and prepares the loan files for submission.

During the submission process, no paperwork is exchanged between the broker and lender. With the click of a button, the broker submits the loan(s) for an underwriting and pricing decision via a modem or the Internet to a remote server for processing. The remote server then pulls a credit report electronically, processes the loan data, and a sends a decision back to the broker, thereby eliminating the need for rate sheets. This decision includes a quick approval, a loan price and multiple pricing scenarios.

By providing multiple pricing scenarios, the time involved in finalizing a loan price is significantly decreased. Typically, the process of choosing a loan price involves constant negotiation between the borrower and broker. During these price negotiations the price often fluctuates depending on several key loan characteristics (*e.g.*, interest rate, size of down payment, loan purpose, etc.). The improved loan processing system provides pricing scenarios based on variations in these key loan characteristics. Using these scenarios, a broker can more efficiently work with a borrower to agree on a final price.

Brokers, working with borrowers, can select one of the pricing scenarios provided up-front or re-submit the loan information with completely different loan characteristics.

If the broker wants to "lock in the price" of an approved loan, he can do so electronically with the click of a button, thus eliminating the need for a phone call or human interaction. In addition, a broker can extend and cancel ratelocks electronically. The process of submitting and ratelocking a loan provided above can be completed in ten minutes or less with the improved loan processing system.

With regard to processing physical loan files, the improved loan processing system provides additional functionality as well. Physical files delivered to a lender may be missing necessary documentation. If so, "suspense conditions" are often put on the file, and the broker is notified that he needs to fulfill these conditions. In the traditional and GSE loan approval processes, lenders must mail or fax these suspense conditions to brokers. The improved loan processing system allows a broker to view these loan suspense conditions from their desktop software.

Further, in the traditional and GSE loan approval processes, a lender has no way of identifying how many files will be arriving on a given day. As a result, the number of incoming files may far exceed allocated staff resources. The improved loan processing system, however, allows brokers to provide advance warning to lenders electronically, prior to sending a physical file. By using this improved loan processing system, a lender can allocate staff resources accordingly.

Finally, the improved loan processing system can significantly reduce document preparation time by allowing brokers to prepare loan documents and deliver them to an escrow company via the Internet. This feature also allows an escrow company to better track incoming files for mortgage loan closings.

The improved loan processing system implements the foregoing features through a method for electronically processing loan data for one or more loans which comprises the steps of importing loan data from a loan origination system into a local environment using a graphical user interface; transferring the loan data to a remote environment; processing the loan data at the remote environment to produce an output regarding the loan being processed; and sending the output to the local environment.

A system for electronically processing loan data for one or more loans comprises means for importing loan data from a loan origination system into a local environment using a graphical user interface; means for transferring the loan data to a remote environment; means for processing the loan data at the remote environment to produce an output regarding the loan being processed; and means for sending the output to the local environment.

Both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

Brief Description of the Drawings

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate presently preferred embodiments of the invention and, together with the preceding general description and the following detailed description, explain the principles of the invention.

In the drawings:

Fig. 1 illustrates a loan processing system consistent with the present invention;

Fig. 2 illustrates a flowchart of a method for processing loan data consistent with the present invention;

Fig. 3 illustrates a graphical user interface for accessing a loan processing system consistent with the present invention;

Fig. 4 illustrates a graphical user interface for selecting loan data;

Fig. 5 illustrates a graphical user interface for searching stored loan data;

Fig. 6 illustrates a graphical user interface for displaying loan data relating to loan terms, loan purchase, and a borrower's residence;

Fig. 7 illustrates a graphical user interface for displaying loan data relating to a borrower's finances;

Fig. 8 illustrates a graphical user interface for displaying loan data relating to transactional information;

Fig. 9 illustrates a graphical user interface for displaying loan data relating to underwriting and transmittal information;

Fig. 10 illustrates a graphical user interface for displaying loan data relating to mortgage information;

Fig. 11 illustrates a graphical user interface for displaying loan data relating to loan pricing and approval;

Fig. 12 illustrates a graphical user interface for displaying loan data relating to loan submission guidelines;

Fig. 13 illustrates a graphical user interface for displaying credit report data;

Fig. 14 illustrates a graphical user interface for displaying loan suspense information;

Fig. 15 illustrates a graphical user interface for locking in a loan rate;

Fig. 16 illustrates a graphical user interface for displaying an advance warning regarding a loan;

Fig. 17 illustrates a graphical user interface for selecting a loan report;

Fig. 18 illustrates a graphical user interface for generating a loan report;

Fig. 19 illustrates a graphical user interface for generating loan pricing and rate lock information;

Fig. 20 illustrates a graphical user interface for generating document requirements;

Fig. 21 illustrates a graphical user interface for generating loan suspense information; and

Fig. 22 illustrates a flowchart of a method for processing loan data received from a source.

Detailed Description of the Invention

Systems and methods consistent with the present invention use an automated process to determine whether to approve or deny a loan. Initially, loan processing software generates a graphical user interface in a client environment to import, validate, and prepare loan data from a LOS system for transfer to a remote server environment for processing. The remote server environment includes multiple servers for processing the loan data based on services associated with the loan (*e.g.*, credit, risk, underwriting, etc.). An output is generated upon completion of the loan data processing (*e.g.*, approval with loan pricing scenarios or disapproval of the loan). The output is sent to the client environment for consideration and approval. Once approved, a loan price may be rate-locked for a predetermined period of time at the request of a user (*e.g.*, borrower).

Fig. 1 illustrates a loan processing system 100 consistent with the present invention. Loan processing system 100 is an automated system configured to process any type of loan data including loan data relating to mortgages, personal loans, and automobile/boat loans. One skilled in the art should recognize that loan processing system 100 illustrated in Fig. 1 may have a different configuration and include additional components not shown or discussed herein, but are consistent with the present invention. As illustrated in Fig. 1, loan processing system 100 includes a client environment 105 and a server environment 110 connected by one or more communication channels 115. Client environment 105 includes a computer system configured to permit a user (*e.g.*, mortgage broker) to receive, validate, prepare, and transfer loan data to a remote server environment for processing. To facilitate this operation, client environment 105 includes a processor 120, input/output devices 125, and a memory 130.

Processor 120 is a high-speed processor, such as an Intel Pentium® processor, capable of processing textual and graphical information. Processor 120 sends information to and receives information from input/output devices 125 to enable user interaction. Input/output devices 125 may include a keyboard, mouse, microphone, monitor, speaker, and other components that support user interaction. Processor 120 also sends information to and receives information from memory 130. Preferably, memory 130 is random access memory (RAM) located in a housing with processor 120 or in an external unit (not shown).

Memory 130 stores data and software implemented by processor 120. Specifically, memory 130 stores loan processing software 131, such as electronic – Mortgage Information Transaction System (e-MITS™) software developed by IndyMac, Inc. of Pasadena, California, and client software 133. Loan processing software 131 is a program that generates a graphical user interface to support user interaction and provide loan processing functionality in client environment 105. Client software 133 includes communication software for transferring data between client environment 105 and server environment 110. One skilled in the art will appreciate that memory 130 may store additional software programs as necessary to perform desired functions in client environment 105 consistent with the present invention.

Client environment 105 is configured to communicate with a LOS system 135 (*e.g.*, Contour Loan Handler™ and Calyx Winpoint™) through a datastore 140 to import loan data for processing. LOS systems typically include a software program that allows a user to enter in borrower information and other data. The entered data is stored in datastore 140. Loan processing software 131 serves as a bridge between LOS system 135 (through datastore 140) and server environment 110 to provide preliminary loan processing and validation. A method for loan processing using LOS system 135, datastore 140, and loan processing software 131 consistent with the present invention is described below with respect to FIG. 2.

Server environment 110 is a central loan processing environment configured to process multiple loan requests from multiple client environments. Server environment 110 processes each request and computes an output (*e.g.*, approval or disapproval of loan, loan pricing scenarios, etc). Once computed, the output is transferred to the requesting client environment.

Preferably, server environment 110 includes six individual servers configured to perform a specific task in the loan approval process. The six servers are connected to each other in a way that supports pipeline processing. That is, the individual servers process a loan in a pre-defined order. Pipeline processing allows the output of one server to be fed into one or more subsequent servers. These servers include a dispatcher server 145, a pre-processor server 150, a credit server 155, a risk grade server 160, an underwriting server

165, and a pricing server 170. Dispatcher server 145 assigns each server a task. In addition, each server includes a user interface for displaying the status of loans and server performance information throughout the loan approval process. The servers of server environment 110, illustrated in Fig. 1, provide the necessary functionality to implement methods consistent with the present invention described herein. One skilled in the art will appreciate, however, that servers or other components may be added or removed from server environment 110, as necessary, to conform to a specific user environment.

Dispatcher server 145 receives loan data from a requesting source (*e.g.*, client environment 105), routes the loan data within server environment 110 to other servers, and transfers an output regarding loan approval to the requesting source. Dispatcher server 145 can communicate directly with any of the servers in server environment 110. This server includes a queue 146 for receiving data, a processor 147 for processing the received data, and a memory 148 for storing data. As illustrated in Fig. 1, memory 148 stores dispatcher server software 149, which is implemented by processor 147 to perform dispatcher server 145 functions described in detail below.

Pre-processor server 150 prepares the loan data for processing and computes a loan-to-value (LTV) ratio and a total loan-to-value (TLTV) ratio. This server includes a queue 151 for receiving data from dispatcher server 145, a processor 152 for processing the received data, and a memory 153 for storing data. As illustrated in FIG. 1, memory 153 stores pre-processor server software 154, which is implemented by processor 152 to perform pre-processor server 150 functions described in detail below.

Credit server 155 uses the borrower's name, social security number, and address to obtain a credit report and to generate a decision from FICO scores and raw credit data. This server includes a queue 156 for receiving data from dispatcher server 145 and/or pre-processor server 150, a processor 157 for processing the received data, and a memory 158 for storing data. As illustrated in FIG. 1, memory 158 stores credit server software 159 which is implemented by processor 157 to perform credit server 155 functions described in detail below.

Risk grade server 160 receives loan data and credit score information from dispatcher server 145 and credit server 155. Using this data and information, risk grade

server 160 generates a risk grade for the loan, including loss coverage estimates, and computes subordination levels. Subordination levels reflect the cash flow for a loan that contributes to each class of securities in a pool (*e.g.*, the higher the subordination level, the riskier the loan). Risk grade server 160 includes a queue 161 for receiving data, a processor 162 for processing the received data, and a memory 163 for storing data. As illustrated in FIG. 1, memory 163 stores risk grade server software 164, which is implemented by processor 162 to perform risk grade server 160 functions described in detail below.

Underwriting server 165 receives loan and risk grade data from dispatcher server 145 and/or risk grade server 160 to determine underwriting guidelines and documentation requirements for the loan. This server includes a queue 166 for receiving the loan and risk grade data, a processor 167 for processing the received data, and a memory 168 for storing data. As illustrated in Fig. 1, memory 168 stores underwriting server software 169, which is implemented by processor 167 to perform underwriting server 165 functions described in detail below.

Pricing server 170 uses subordination levels and loan and risk grade data to generate pricing scenarios for the loan. This server includes a queue 171 for receiving data, a processor 172 for processing the received data, and a memory 173 for storing data. As illustrated in FIG. 1, memory 173 stores pricing server software 174, which is implemented by processor 172 to perform pricing server 170 functions described in detail below.

Server environment 110 is configured to communicate with external resources 180 (*e.g.*, credit reporting agencies) to send and receive information used in the loan approval process. This communication can be accomplished using any communication medium capable of transferring data, including public telephone lines or dedicated communication circuits.

Client environment 105 and server environment 110 are connected by communication channel 115, which is a wireline channel supported by any capable communication medium. Communication channel 115 can be a wide area network or a local area network that supports the transfer of data signals (*e.g.*, Internet, telephone, etc.).

Although not illustrated in Fig. 1, communication channel 115 can also support multiple client and server environments to implement the loan processing systems and methods described herein.

Fig. 2 illustrates a flowchart of a method for processing loan data consistent with the present invention. The method begins with the step of importing and verifying loan data in client environment 105 for a single loan or multiple loans using loan processing software 131 (step 200). Preferably, loan processing software 131 imports the loan data from a LOS system datastore into a graphical user interface implemented by processor 120 in client environment 105. Loan processing software 131 validates the loan data (*i.e.*, ensures loan data is complete) and saves it in a local datastore for subsequent transmission to server environment 110 (step 210). If the loan data pertains to a single loan, the time between saving and transmission can be virtually instantaneous. The user, however, may wish to submit loan data for a number of loans as a batch at the end of the business day to reduce communication costs. In this instance, the user holds the multiple loan data in a batch until a specified time (step 220).

At the appropriate time, the loan data is transmitted to server environment 110 as a single loan or a batch of loans (step 230). Server environment 110 receives the loan data for each loan and processes the loan data in accordance with the services associated with each loan (step 240). After processing the loan data, server environment 110 determines whether to approve or not approve the loan (step 243). If the loan is not approved, an output indicating this fact is sent to client environment 105 along with reasons for the disapproval (step 247). If the loan is approved, pricing server 170 generates an output, which includes a loan price, and sends it to client environment 105 for approval (step 250).

At this point, the user of client environment 105 can decide whether the loan price is satisfactory (step 260). If not, the user can modify or correct the loan data, where appropriate, and save it in local datastore 140 (step 270). The user then transmits the modified loan data to server environment 110 for processing. If the loan price is satisfactory for a single loan, the user can request a rate-lock from server environment 110 (step 280), which is only available for a single loan. This guarantees the user a certain loan price for a specified period of time. The foregoing method may be repeated as necessary to

process additional loan data for a single loan or a batch of loans. An example of loan processing software 131 implemented in client environment 105 consistent with the present invention is described in detail with respect to Figs. 3-21 and software implemented on the servers in server environment 110 is described in detail with respect to Fig. 22.

Figs. 3-21 illustrate different screens of a graphical user interface generated by loan processing software 131 consistent with the present invention. The software shown in these figures is e-MITS. One skilled in the art will appreciate that e-MITS is described in Figs. 3-21 merely as an example of loan processing software consistent with the present invention.

When loan processing software 131 is first executed on processor 120, an access screen 300 is generated, as shown in Fig. 3. This screen requires the user to enter a name and a password. Once access is granted, loan processing software 131 generates a screen 400 for selecting loan data, as shown in Fig. 4. This display allows the user to select all loans, loans new to loan processing software 131, loans waiting submission, loans submitted to server environment 110, loan decisions received from server environment 110, loans rate-locked with server environment 110, and canceled loans. Once selected, the loan data for the selected loan is imported into the graphical user interface of loan processing software 131.

Fig. 5 illustrates a screen 500 for searching selected loan data stored in memory 130 or datastore 140. Because all loans were selected in the previous screen of Fig. 4, screen 500 lists loan data in a spreadsheet for all borrowers listed in memory 130 or datastore 140. This screen displays the borrower's name, client environment loan number, address, server environment loan number, and loan state. Column headers for these categories may differ from the column headers in LOS system 135. Moreover, this screen may be configured to include more or less information as desired. In addition, if using a mouse, a user can click the right button of the mouse to generate a pop-up menu (not shown) on the screen that provides the user with a list of functions (*e.g.*, OPEN, SORT, TRANSMIT, RECEIVE, etc.).

Fig. 6 illustrates a screen 600 for entering or displaying loan data associated with a single loan selected from the previous screen. This screen allows the user to enter data

directly into the graphical user interface or display data imported from LOS system 135 via datastore 140. The screen includes loan data pertaining to the type and terms of a loan (*i.e.*, 30-year fixed mortgage), property information and purpose of loan, and borrower's information. The loan data is displayed in fields and may be modified by a user.

Fig. 7 illustrates a screen 700 for showing financial loan data of the borrower. Specifically, Fig. 7 shows loan data relating to monthly income and combined housing expense information of the borrower as well as liquid asset and liability data. The user can enter data into this screen or modify data imported from LOS system 135 via datastore 140.

Fig. 8 illustrates a screen 800 for showing loan application information relating to transactional information. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140.

Fig. 9 illustrates a screen 900 for displaying loan data relating to underwriting and transmittal information. Specifically, screen 900 includes fields for borrower and property information, mortgage information, additional delivery data, and underwriting information. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140.

Fig. 10 illustrates a screen 1000 for displaying loan data relating to mortgage information and other data relating to the loan. This data includes mortgage insurance data, rate-lock information, and "buy down" data. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140. The user can transmit the loan data imported and validated by loan processing software 131 to server environment 110 after completing this screen or screen 900.

Fig. 11 illustrates a screen 1100 for showing a decision regarding loan pricing and approval generated by server environment 110. If the loan is eligible for purchase and loan guidelines are satisfied, this screen will include fields for loan price, pricing date, a matrix of pricing scenarios, and lender guidelines (*e.g.*, IndyMac guidelines). The user can also determine the status of a loan from this screen. If the loan is under review and guidelines are not yet satisfied, screen 1100 will show a field for guideline violations and explanations for why the guidelines are not met.

Fig. 12 illustrates a screen 1200 for displaying loan data relating to loan submission guidelines. Specifically, this screen shows a guidelines category and a description for each category. For each category (*e.g.*, standard, legal, credit), this screen identifies additional information required by the lender to issue the loan. From this screen, the user also has the option of viewing and printing a borrower's credit report and viewing loan suspense information as illustrated on screens 1300 and 1400 in Figs. 13 and 14, respectively.

Fig. 15 illustrates a screen 1500 for showing rate-lock information associated with the loan. This screen may be opened using a "Rate Lock" button illustrated in screen 1100 of Fig. 11. If a loan is eligible for purchase (*i.e.*, approved by a GSE), a user can rate-lock a loan price by entering the rate-lock contact name, phone number, and fax number. The user then receives a confirmation of the loan price from server environment 110. Once a loan is rate-locked, loan processing software 131 allows a user to extend the rate-lock period for at least one additional period.

Fig. 16 illustrates a screen 1600 for displaying an advance warning regarding the transfer of loan data from client environment 105 to server environment 110. Specifically, this screen allows the user to notify server environment 110 when documents from the physical loan file will be sent (*e.g.*, for data validation or funding). This screen can be opened from the "File" menu bar option (*e.g.*, shown in screen 1200 of Fig. 12) or by clicking on screen 500 of Fig. 5 using the right button of a mouse. To send an advance warning using this screen, the user enters the data validation date and/or funding package received date and selects the "Send" button. To send an advanced warning for another loan, the user selects the "Clear" button, enters the loan number, presses the ENTER key, and enters the appropriate information for the loan.

Fig. 17 illustrates a screen 1700 for allowing a user to print reports generated by loan processing software 131 or another source (*e.g.*, server environment 110). The user can select one or more reports from those listed on the screen by placing a checkmark in a box adjacent the desired report. As illustrated in Fig. 17, these reports include a loan registration report (*e.g.*, Loan Submission Schedule (LSS) Report in e-MITs), a pricing and rate-lock information report, documentation requirements report, and a loan suspense

report, as shown on screens 1800, 1900, 2000, and 2100 of Figs. 18, 19, 20, and 21, respectively.

Fig. 22 illustrates a flowchart of a method for processing loan data in server environment 110. As illustrated in Figs. 3-21, the user is able to interact with the server environment by sending and receiving loan data, loan decision information, loan eligibility information, loan pricing calculations, and other criteria. To generate this information, server environment 110 includes a multitude of servers, as discussed above with respect to Fig. 1, that perform different automated services throughout the loan approval process. The method begins with dispatcher server 145 of Fig. 1 implementing dispatcher software 149 to check its queue for loan data, including the loan number, received from a client environment or other source (step 2200). This step further includes determining services requested with the loan data and sending the loan data to the servers that perform the requested services, starting with the closest server in the pipeline. Several dispatcher server 145 processes may be run simultaneously to expedite the loan approval process for multiple requests.

If pre-processing services are required, dispatcher server 145 sends the loan data to pre-processor server 150 (step 2210). This server implements pre-processor server software 154 to poll its queue for loan data and determine whether enough loan data is present for processing. If not, pre-processor server 150 notifies the loan source (*e.g.*, client environment 105) of the problem through dispatcher server 145. If enough loan data exists, step 2210 further includes computing LTV and TLTV, which are used in underwriting server 165. Additionally, pre-processor server 150 sends a request to pricing server 170 to compute a note rate from a requested loan data price, if required, using the computed LTV and TLTV.

Credit server 155 implements credit server software 159 to poll its queue for loan data and extract the borrower's name and social security number to obtain a credit report and a credit score (step 2220). To obtain a credit report, credit server sends a request for a credit report (using the loan data) over a communication channel to a credit reporting vendor (*e.g.*, Equifax). The credit reporting vendor locates one or more credit reports on the borrower from different bureaus and sends them to credit server 155. Preferably, the

credit reports include a credit score (*e.g.*, FICO score) and are in a printable format.

Risk grade server 160 receives the loan data and credit score and executes risk grade server software 164 to determine a risk grade and a loss coverage estimate for the loan (step 2230). To determine these values, risk grade server 160 sends the loan data and credit score to a rating agency. However, risk assessment server 160 may use rating software in server environment 110 (*e.g.*, Standard & Poor's LEVELS model software) to generate risk grade and loss coverage estimate values. A risk grade is an assessment of the relative risk of a loan with respect to the probability of default. A loss coverage estimate is a measure of the amount of credit protection, or credit enhancement, necessary to protect investors against losses under different economic scenarios.

Underwriting server 165 receives loan and risk data and implements underwriting server software 169 to provide automated underwriting decisions and documentation requirements (step 2240). Underwriting server 165 feeds information (*e.g.*, risk grade and loan data) from its queue into an underwriting software application (*e.g.*, Eclipse™), which checks the information against underwriting guidelines. If the loan meets the underwriting guidelines, underwriting server software 169 generates documentation requirements for the loan (*e.g.*, "Please provide two years most recent W-2s and/or paystubs). Otherwise, underwriting server 165 will provide a reason why guidelines were not met by the borrower (*e.g.*, "Maximum 105% LTV allows for all loans. Your loan has an LTV of 120%). Loan processing software 131 in client environment 105 will display the foregoing messages as part of the output results.

Pricing server 170 implements pricing server software 174 to determine the price of loans using risk grade, subordination levels, and loan data received in its queue (step 2250). Pricing server 170 uses real-time market data for certain benchmark securities to compute the price.

Server environment 110 can generate a loan approval decision and send it to client environment 105 in approximately ten minutes (step 2270). The loan approval decision is an output that indicates the loan is "eligible for purchase," "under review," or "rejected." If eligible for purchase, the user receives the price for the loan as submitted, pricing scenarios, and a list of loan packaging or submission guidelines. If the loan is under

review, the user receives the exact reason why the loan is under review. If the loan is rejected, reasons for the rejection are provided to the user.

Systems and methods described herein implement loan processing software in a client environment and utilize dedicated servers in a server environment to provide automated loan processing functionality for virtually every stage of the loan approval process. The loan processing systems and methods described herein further provide expeditious loan approval decisions at a minimal cost.

While there has been illustrated and described preferred embodiments and methods of the present invention, those skilled in the art will understand that various changes and modifications may be made, and equivalents may be substituted for elements thereof, without departing from the true scope of the invention.

In addition, many modifications may be made to adapt a particular element, technique or implementation to the teachings of the present invention without departing from the central scope of the invention. Therefore, this invention should not be limited to the particular embodiments and methods disclosed herein, but should include all embodiments falling within the scope of the appended claims.

What is Claimed is:

1. A method for electronically processing loan data for one or more loans, comprising the steps of:

importing loan data from a loan origination system into a local environment using a graphical user interface;

transferring the loan data to a remote environment;

processing the loan data at the remote environment to produce an output regarding the loan being processed; and

sending the output to the local environment.

2. The method of claim 1 further comprising the step of validating the imported loan data.

3. The method of claim 2 wherein the validating step includes the step of determining whether the imported loan data includes a minimum level of information to process.

4. The method of claim 1 wherein the transferring step includes the step of transferring data relating to a single loan.

5. The method of claim 1 wherein the transferring step includes the step of transferring data relating to a plurality of loans.

6. The method of claim 5 wherein the transferring step includes the step of waiting until a predetermined time to transfer data for the plurality of loans.

7. The method of claim 5 wherein the transferring step includes the step of waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

8. The method of claim 1 wherein the processing step includes the step generating a loan purchase decision based on the loan data.

9. The method of claim 1 wherein the processing step includes the step of generating loan pricing information based on the loan data.

10. The method of claim 1 wherein the processing step includes the step of generating loan eligibility information based on the loan data.

11. The method of claim 1 further comprising the step of locking a loan price for a predetermined period of time.

12. The method of claim 11 further comprising the step of extending a locked loan price for an additional predetermined period of time.

13. The method of claim 1 further comprising the step of sending advance warning information from the local environment to the remote environment that indicates the subsequent transfer of a physical loan document therebetween.

14. The method of claim 1 further comprising the step of generating a loan suspense report at the local environment based on the output.

15. A method for electronically processing loan data for one or more loans in a local environment, comprising the steps of:

importing loan data from a loan origination system into the local environment using a graphical user interface;

transferring the loan data to a remote environment for processing;

receiving an output from the remote environment indicating approval or disapproval of the loan based on the processed loan data; and

fixing a loan rate with the remote environment based on the processed loan data.

16. The method of claim 15 further comprising the step of validating the imported loan data.

17. The method of claim 16 wherein the validating step includes the step of determining whether the imported loan data includes a minimum level of information to process.

18. The method of claim 15 wherein the transferring step includes the step of transferring data relating to a single loan.

19. The method of claim 15 wherein the transferring step includes the step of transferring data relating to a plurality of loans.

20. The method of claim 19 wherein the transferring step includes the step of waiting until a predetermined time to transfer data for the plurality of loans.

21. The method of claim 19 wherein the transferring step includes the step of waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

22. A method for electronically processing loan data for a loan received from a source, comprising the steps of:

monitoring the receipt of the loan data from the source;

determining whether the loan data is complete for processing;

generating a credit score based on the loan data;

analyzing the loan data and the credit score for a potential risk;

developing documentation requirements for a loan based on the loan data and potential risk; and

pricing the loan based on a plurality of predetermined loan approval criteria including at least one of the loan data, credit score, potential risk, and documentation requirements.

23. The method of claim 22 wherein the developing step further includes the step of developing documentation requirements based on predetermined underwriting guidelines.

24. The method of claim 22 wherein the determining step includes the step of determining predetermined services associated with the loan data.

25. The method of claim 22 wherein the determining step includes the step of computing a loan-to-value ratio.

26. The method of claim 22 wherein the determining step includes the step of computing a total loan-to-value ratio.

27. The method of claim 22 further comprising the step of generating a loan decision output indicating whether to approve or disprove a loan.

28. A system for electronically processing loan data for one or more loans, comprising:

means for importing loan data from a loan origination system into a local environment using a graphical user interface;

means for transferring the loan data to a remote environment;

means for processing the loan data at remote environment to produce an output regarding the loan being processed; and

means for sending the output to the local environment.

29. The system of claim 28 further comprising means for validating the imported loan data.

30. The system of claim 29 wherein the validating means includes means for determining whether the imported loan data includes a minimum level of information to process.

31. The system of claim 28 wherein the transferring means includes means for transferring data relating to a single loan.

32. The system of claim 28 wherein the transferring means includes means for transferring data relating to a plurality of loans.

33. The system of claim 32 wherein the transferring means includes means for waiting until a predetermined time to transfer data for the plurality of loans.

34. The system of claim 32 wherein the transferring means includes means for waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

35. The system of claim 28 wherein the processing means includes means for generating a loan purchase decision based on the loan data.

36. The system of claim 28 wherein the processing means includes means for generating loan pricing information based on the loan data.

37. The system of claim 28 wherein the processing means includes means for generating loan eligibility information based on the loan data.

38. The system of claim 28 further comprising means for locking a loan price for a predetermined period of time.

39. The system of claim 38 further comprising means for extending a locked loan price for an additional predetermined period of time.

40. A system for electronically processing loan data for a loan received from a source location, comprising:

dispatching means for monitoring the receipt of the loan data from the source;

pre-processing means for determining whether the loan data includes a required loan parameter for processing;

credit means for generating a credit score based on the loan data;

risk means for analyzing the loan data and the credit score for a potential risk;

underwriting means for developing documentation requirements for a loan based on the loan data and the potential risk; and

pricing means for pricing the loan based on a plurality of predetermined loan approval criteria including at least one of the loan data, credit score, potential risk, and documentation requirements.

41. The system of claim 40 wherein the dispatching means includes a server computer with a processor and a queue.

42. The system of claim 41 wherein the dispatching means includes means for checking the queue for loan data.

43. The system of claim 41 wherein the dispatching means includes means for determining whether a service is requested with the loan data.

44. The system of claim 41 wherein the dispatching means includes means for sending the loan data to a server providing the requested service.

45. The system of claim 40 wherein the pre-processing means communicates with the dispatching means and includes a server computer with a processor and a queue.

46. The system of claim 45 wherein the pre-processing means includes means for checking the queue for loan data.

47. The system of claim 45 wherein the pre-processing means includes means for computing a loan-to-value ratio.

48. The system of claim 45 wherein the pre-processing means includes means for computing a total loan-to-value ratio.

49. The system of claim 45 wherein the pre-processing means includes means for feeding pricing information to the pricing means.

50. The system of claim 40 wherein the credit means communicates with the dispatching means and includes a server computer with a processor and a queue.

51. The system of claim 50 wherein the credit means includes means for retrieving credit data from credit depositories.

52. The system of claim 50 wherein the credit means includes means for computing credit scores for the loan.

53. The system of claim 50 wherein the credit means includes means for generating a printable version of a credit report.

54. The system of claim 40 wherein the risk means communicates with the dispatching means and includes a server computer with a processor and a queue.

55. The system of claim 54 wherein the risk means includes means for determining a risk grade for the loan.

56. The system of claim 54 wherein the risk means includes means for computing a plurality of subordination levels.

57. The system of claim 40 wherein the underwriting means communicates with the dispatching means and includes a server computer with a processor and a queue.

58. The system of claim 57 wherein the underwriting means includes means for providing automated underwriting decisions.

59. The system of claim 57 wherein the underwriting means includes means for providing documentation requirements.

60. The system of claim 40 wherein the pricing means communicates with the dispatching means and includes a server computer with a processor and a queue.

61. A method for processing loan applications received at a server system connected to a network, the method comprising the steps, performed by the server system, of:

inputting a loan request including loan data corresponding to a loan;

inputting requester data including information identifying an entity seeking the loan;

accessing at least one database to verify at least a portion of the information identifying the entity;

providing an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

determining a loan price indicating that the loan is eligible for purchase based on a predetermined set of criteria; and

inputting data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is bided for a predetermined time.

62. The method of claim 61, wherein the method further comprises the step of:

permitting a user to monitor a status corresponding to the step of providing an indication reflecting a loan approval or rejection.

63. The method of claim 61, wherein the step of providing an indication reflecting a loan approval or rejection comprises the steps of:

determining from information related to the requester data a score reflecting the entity's ability to repay the loan;

determining a risk grade for the loan and subordination levels based on information from the loan data and the score; and

determining underwriting guidelines and documentation requirements for the loan based on the risk grade and information from the loan data.

64. The method of claim 61 wherein the step of providing an indication reflecting a loan approval or rejection comprises the step of;

selecting a loan rate based on a risk associated with the loan.

65. The method of claim 62, further comprising the step of:

providing a set of pricing scenarios for the loan, each scenario representing a different interest ratio, down payment, and loan program.

66. The method of claim 61, wherein the step of providing an indication reflecting a loan approval or rejection comprises the substep of:

determining documentation requirements associated with the loan when the indication reflects that the loan has been approved.

67. The method of claim 66, further comprising the step of:

generating closing documents associated with the loan; and

electronically transmitting the closing documents from the server system to a client system connected to the network.

68. A computer-implemented method for processing loan applications, the method comprising the steps of:

inputting into a computer system loan request including loan data corresponding to a loan;

inputting into the computer system requester data including information identifying an entity seeking the loan;

accessing at least one database to verify at least a portion of the information identifying the entity;

providing an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

determining a loan price indicating that the loan is eligible for purchase based on a predetermined set of criteria; and

inputting into the computer system data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is fixed for a predetermined time.

69. A method for processing loan applications by a computer system connected to a display screen, comprising:

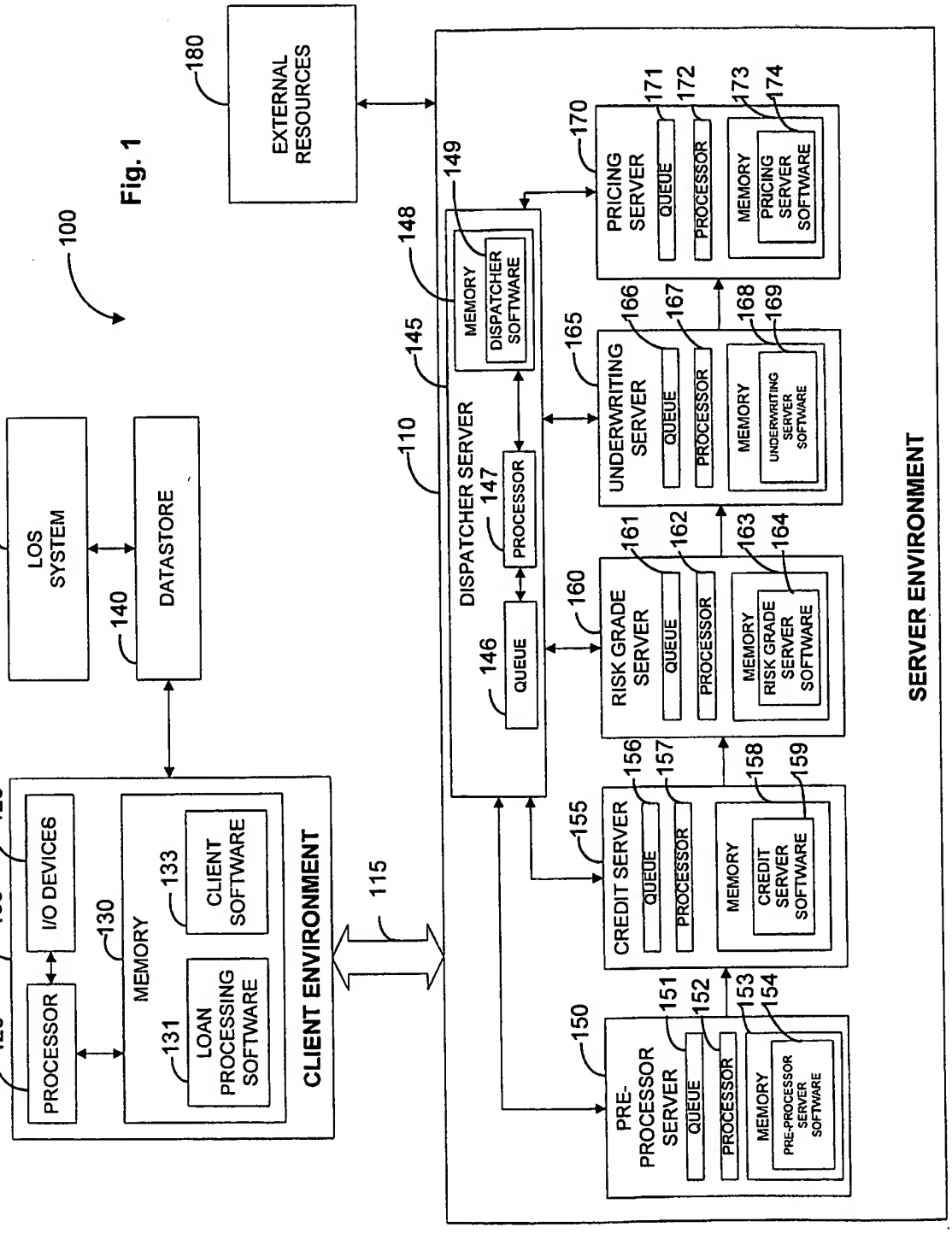
permitting a user to input (i) a loan request including loan data corresponding to a loan, and (ii) requester data including information identifying an entity seeking the loan;

accessing at least one database to verify at least a portion of the information identifying the entity;

presenting a view on the display screen, including an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

determining a loan price based on a predetermined set of criteria; and

permitting the user to input data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is fixed for a predetermined time.


100
Fig. 1
EXTERNAL RESOURCES
180
LOS SYSTEM
135
DATASTORE
140
CLIENT ENVIRONMENT
PROCESSOR
120
I/O DEVICES
125
105
MEMORY
130
LOAN PROCESSING SOFTWARE
131
CLIENT SOFTWARE
133
115
SERVER ENVIRONMENT
DISPATCHER SERVER
110
MEMORY
145
DISPATCHER SOFTWARE
148
149
PROCESSOR
147
QUEUE
146
PRE-PROCESSOR SERVER
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QUEUE
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QUEUE
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CREDIT SERVER SOFTWARE
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QUEUE
161
PROCESSOR
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PRICING SERVER SOFTWARE
174

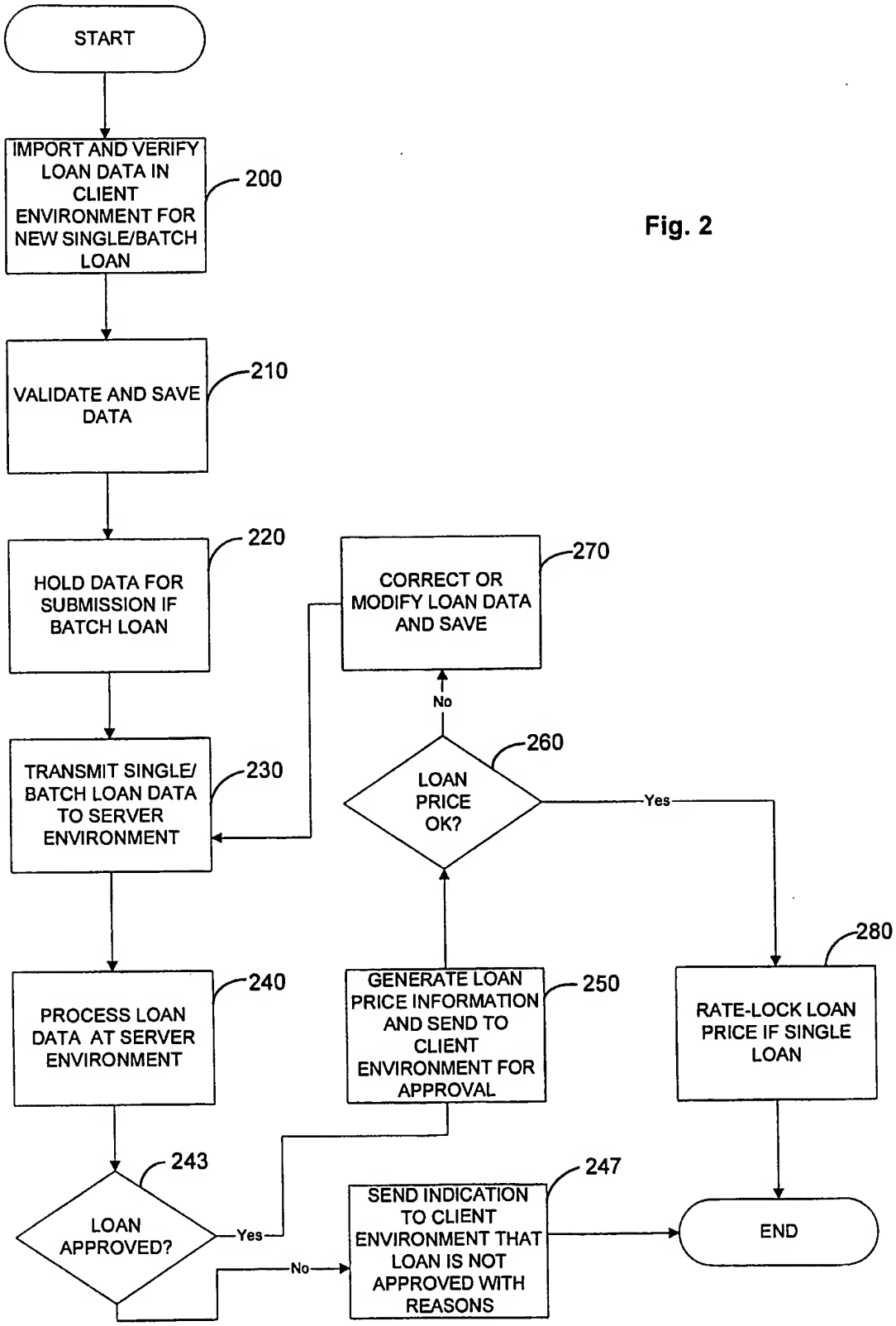
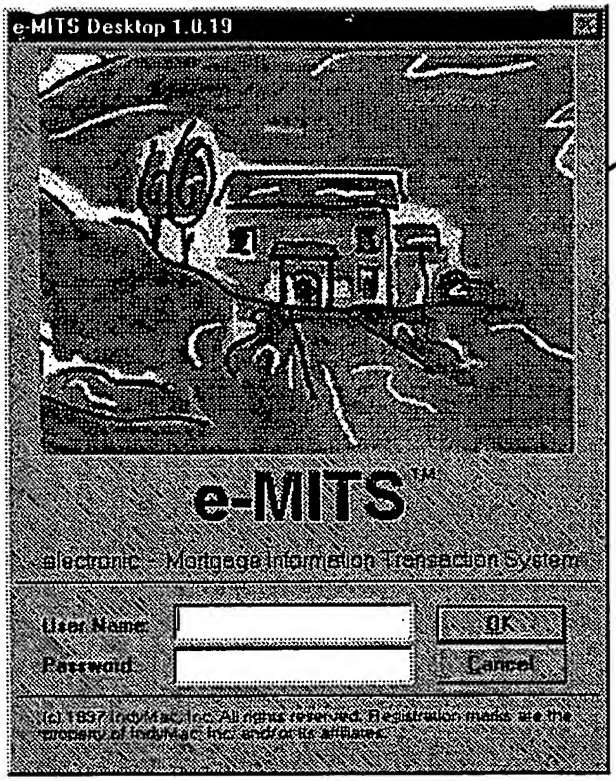

START
IMPORT AND VERIFY LOAN DATA IN CLIENT ENVIRONMENT FOR NEW SINGLE/BATCH LOAN
200
VALIDATE AND SAVE DATA
210
HOLD DATA FOR SUBMISSION IF BATCH LOAN
220
TRANSMIT SINGLE/ BATCH LOAN DATA TO SERVER ENVIRONMENT
230
PROCESS LOAN DATA AT SERVER ENVIRONMENT
240
LOAN APPROVED?
243
Yes
No
CORRECT OR MODIFY LOAN DATA AND SAVE
270
No
LOAN PRICE OK?
260
Yes
GENERATE LOAN PRICE INFORMATION AND SEND TO CLIENT ENVIRONMENT FOR APPROVAL
250
SEND INDICATION TO CLIENT ENVIRONMENT THAT LOAN IS NOT APPROVED WITH REASONS
247
RATE-LOCK LOAN PRICE IF SINGLE LOAN
280
END

Fig. 2

Fig. 3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e-MITS
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User Name:
Password:
OK
Cancel
300

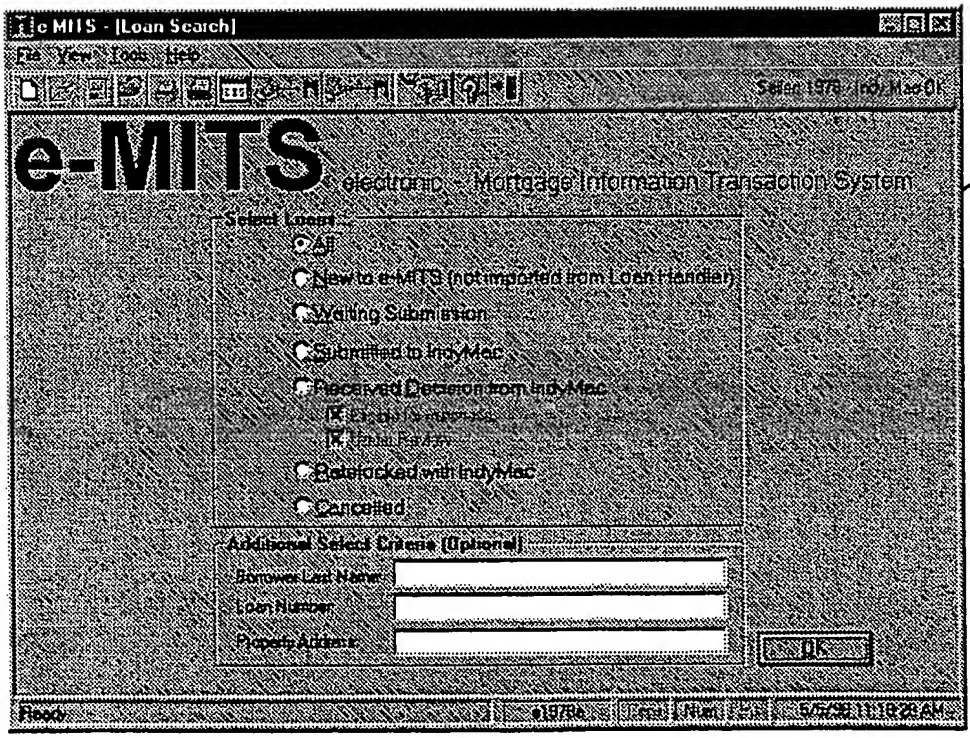
e-MITS - [Loan Search]
File View Tools Help
e-MITS
electronic - Mortgage Information Transaction System
Select Loans
All
New to e-MITS (not imported from Loan Handler)
Waiting Submission
Submitted to IndyMac
Received Decision from IndyMac
Rate locked with IndyMac
Cancelled
Additional Select Criteria (Optional)
Borrower Last Name:
Loan Number:
Property Address:
OK
400

Fig. 4

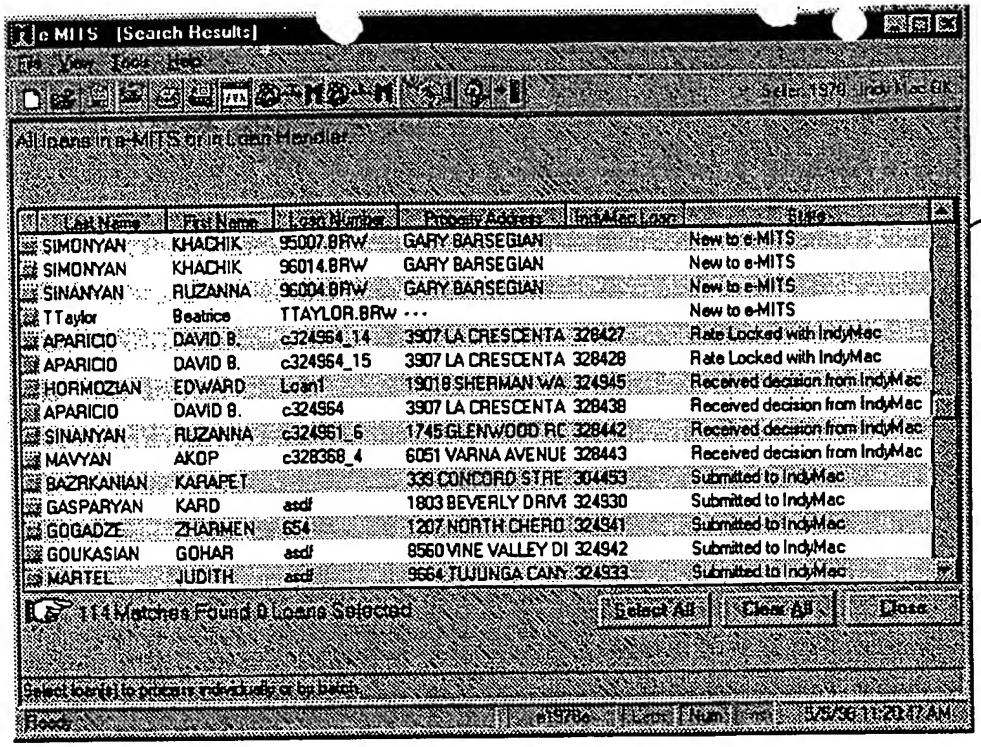

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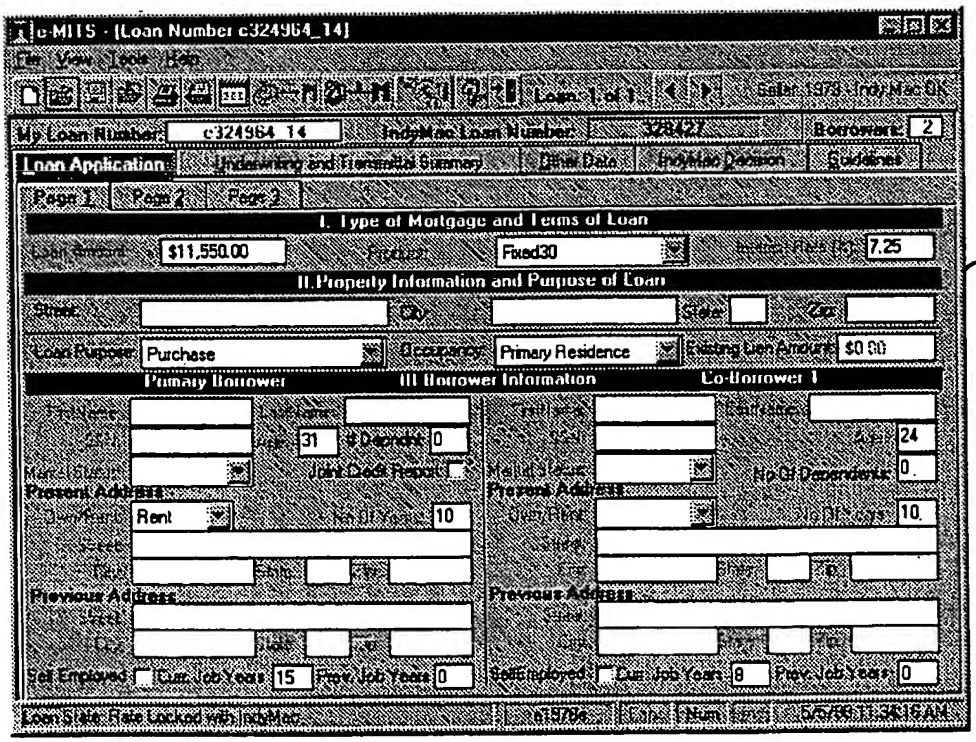
Fig. 5



600

Fig. 6

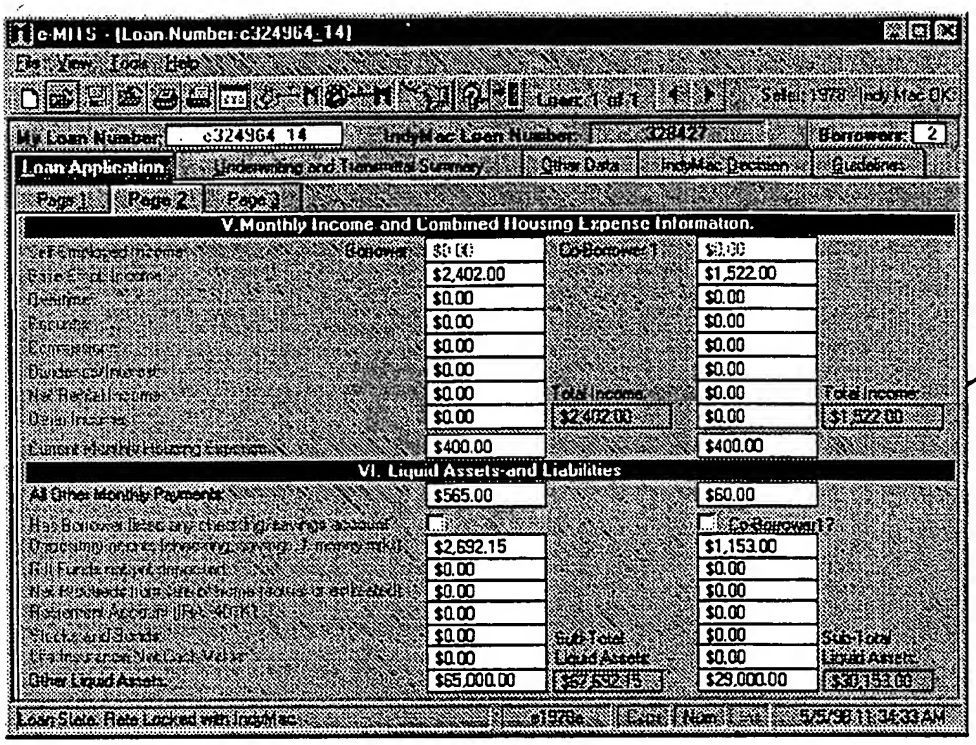


Fig. 7

700

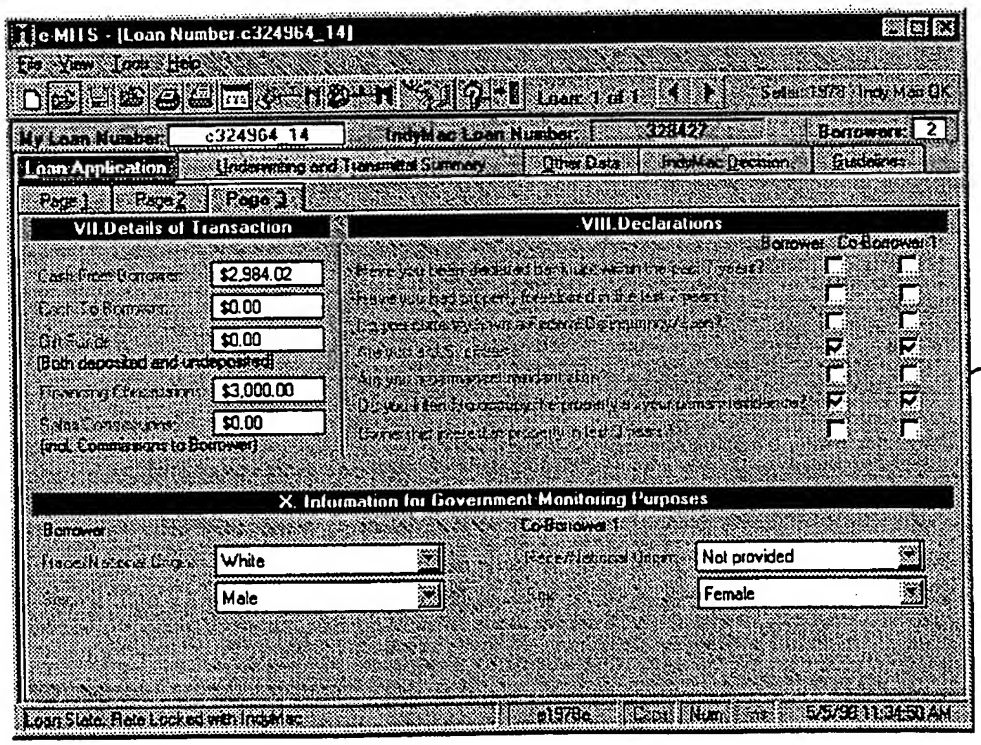


Fig. 8

800

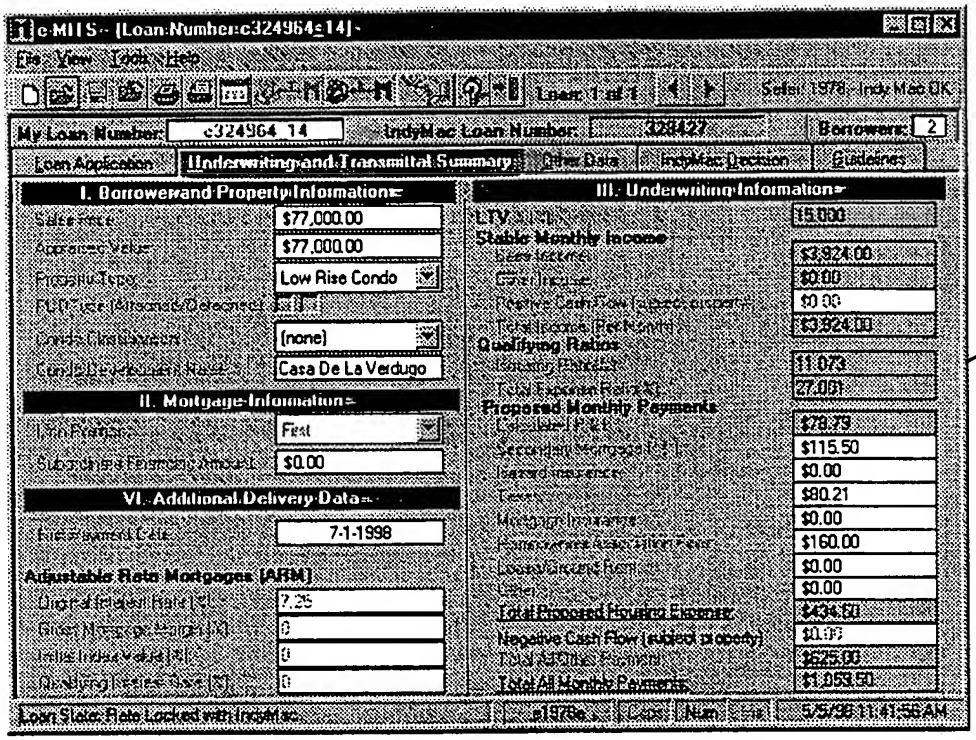


Fig. 9

900

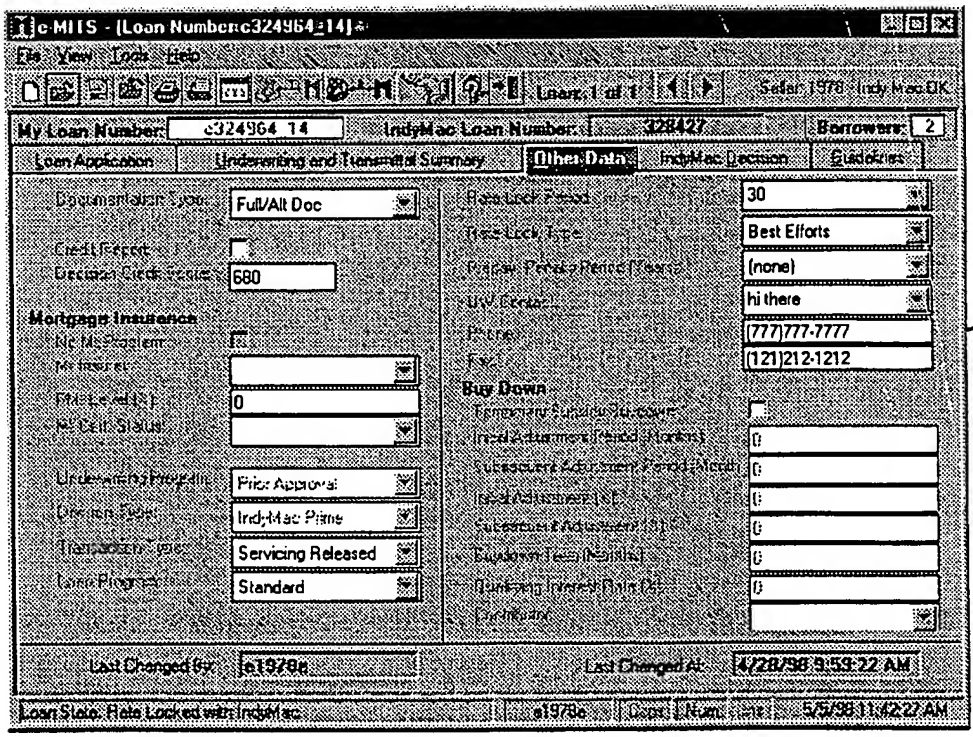


Fig. 10

1000

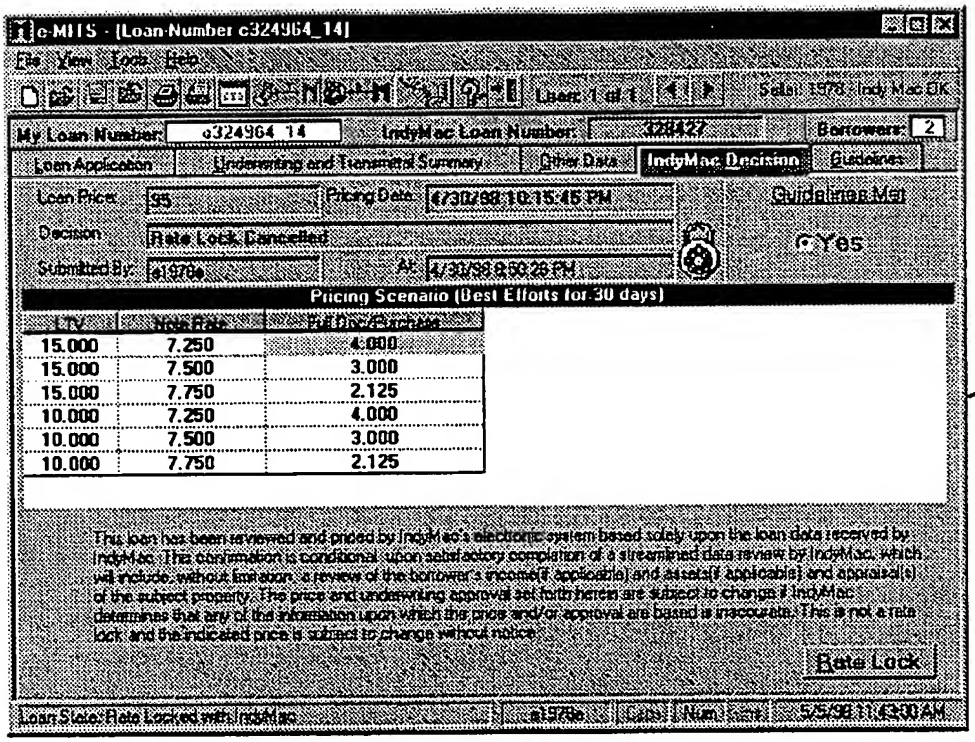


Fig. 11

1100

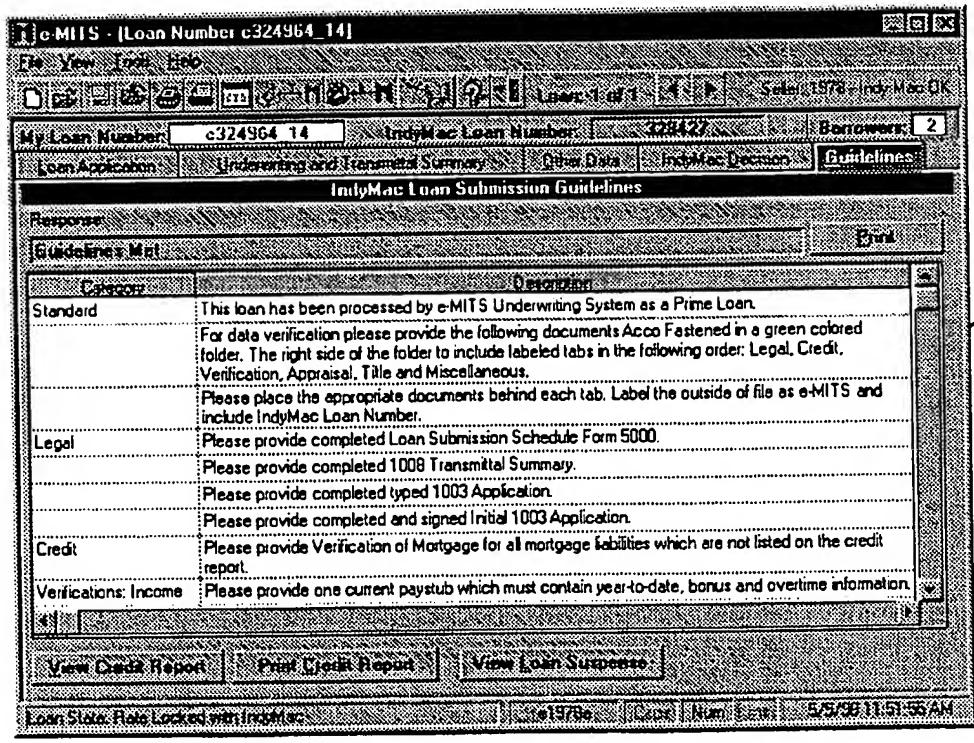


Fig. 12

1200

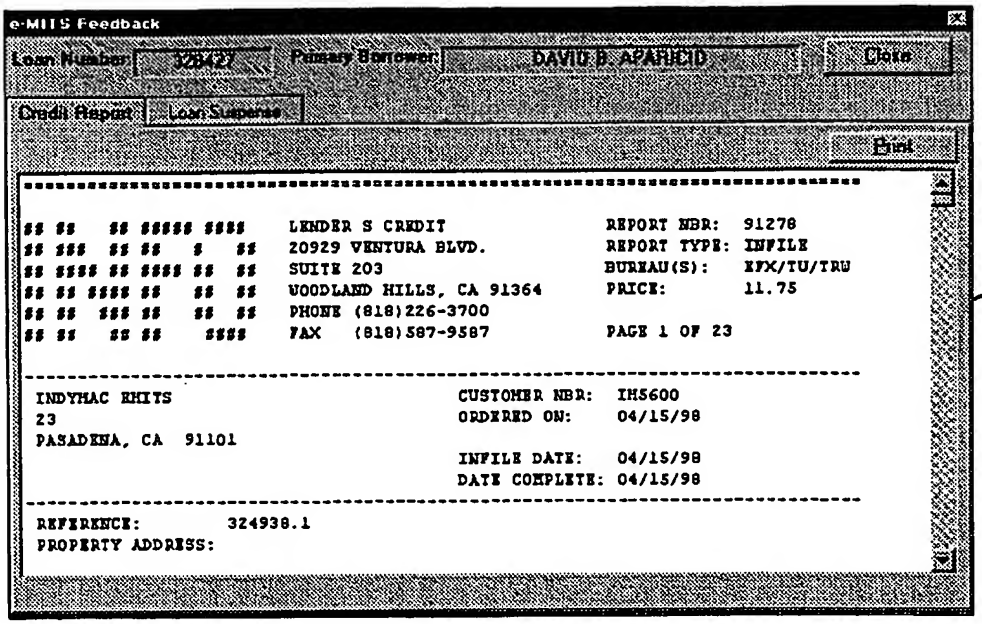


Fig. 13

1300

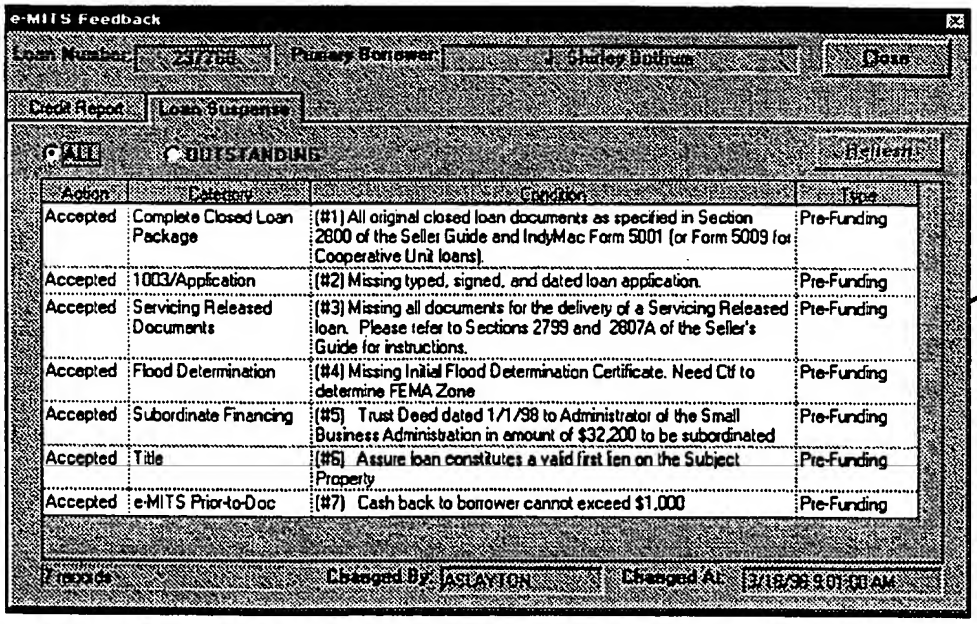


Fig. 14

1400

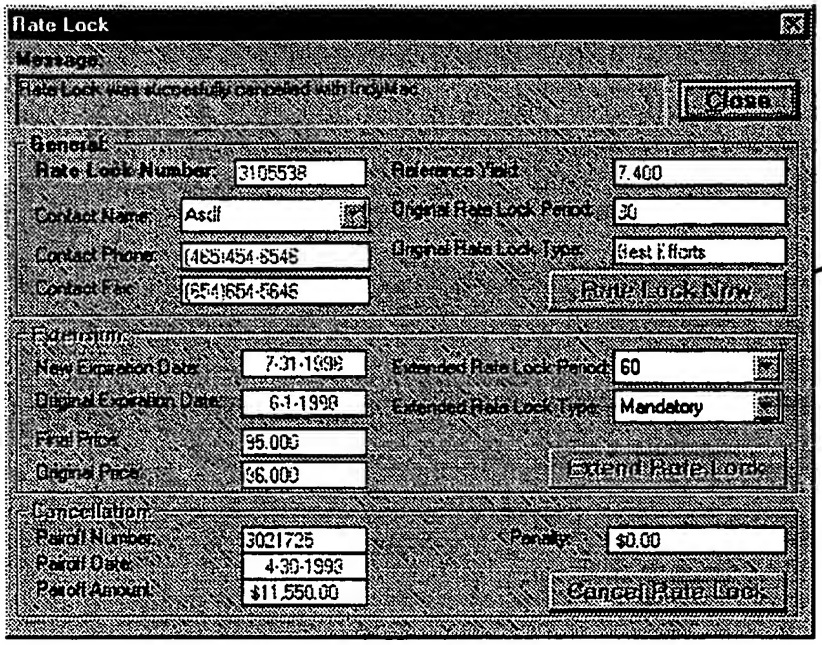
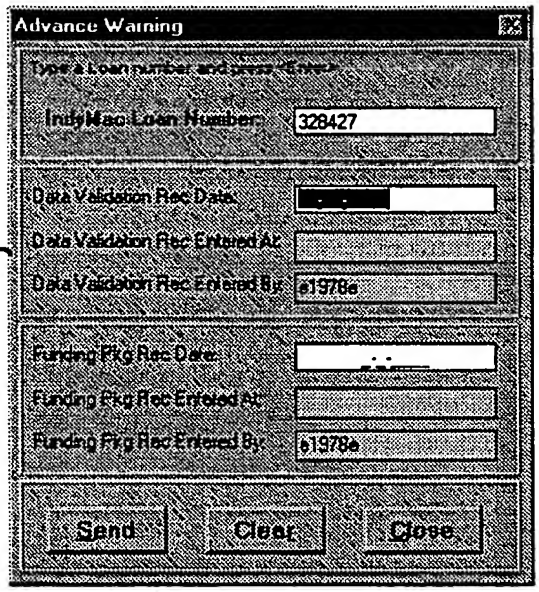


Fig. 15

1500



1600

Fig. 16

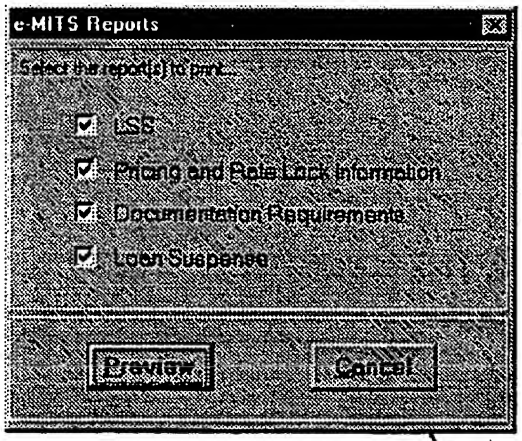


Fig. 17

1700

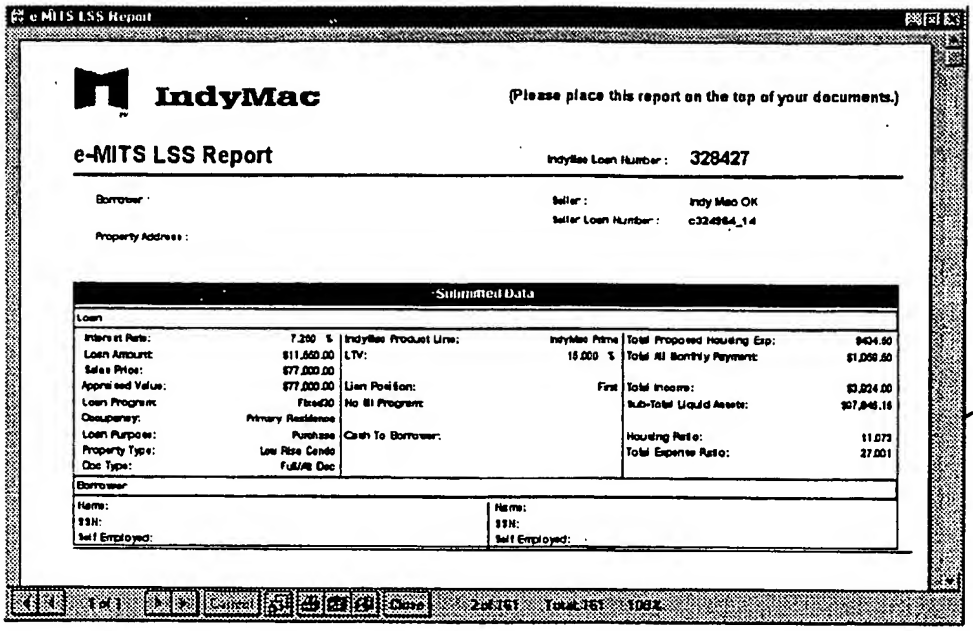


Fig. 18

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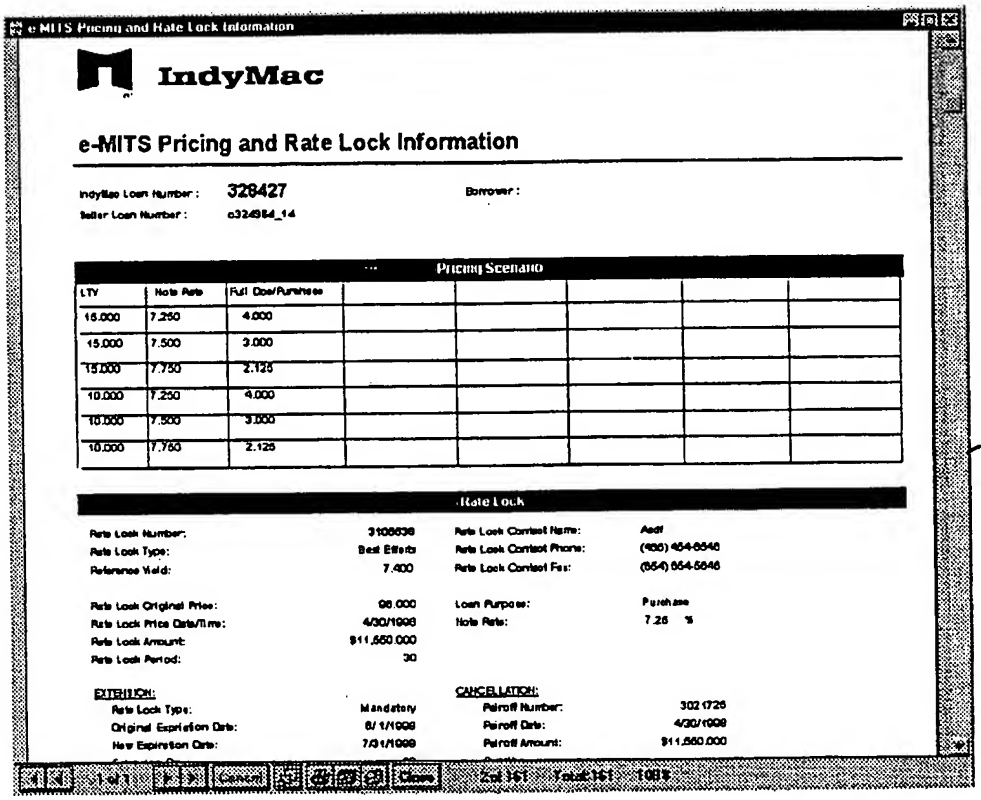

Fig. 19

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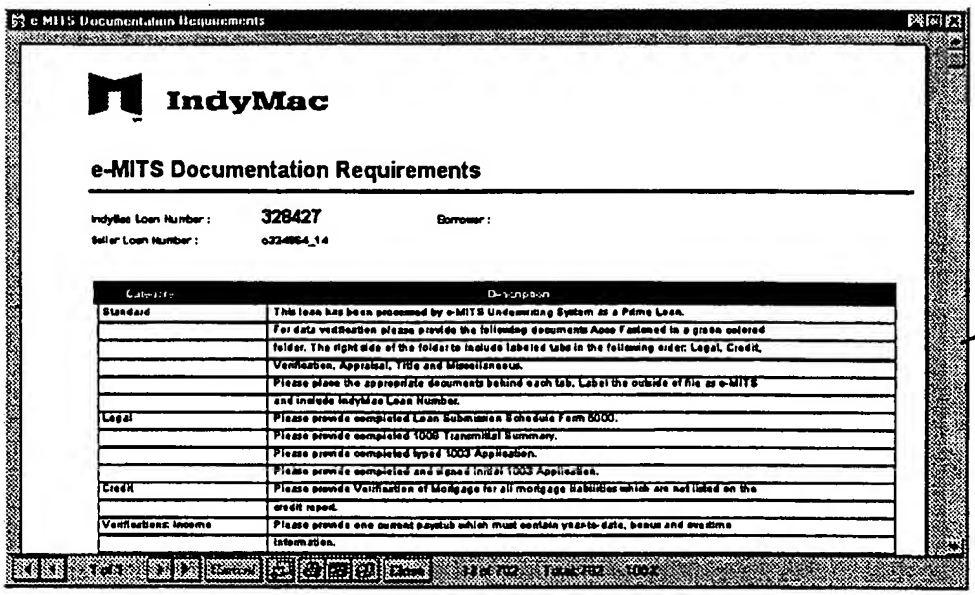

Fig. 20

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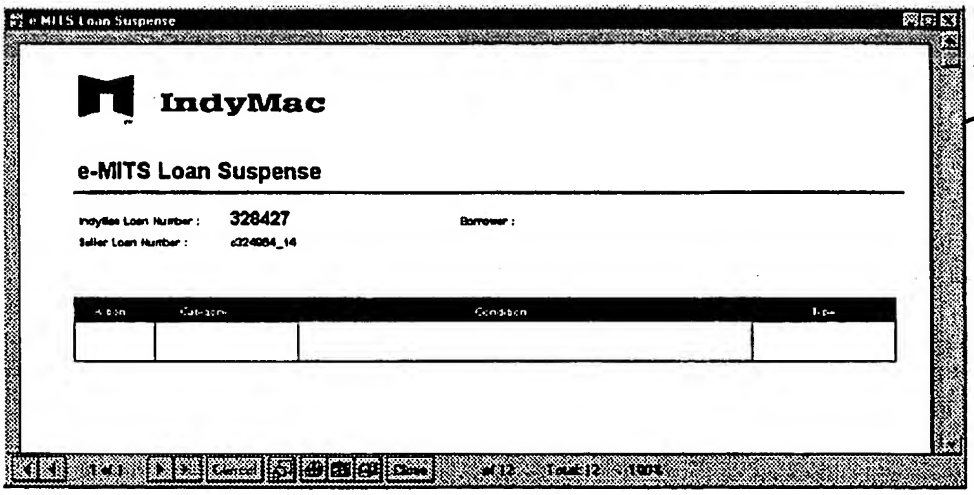

2100

Fig. 21

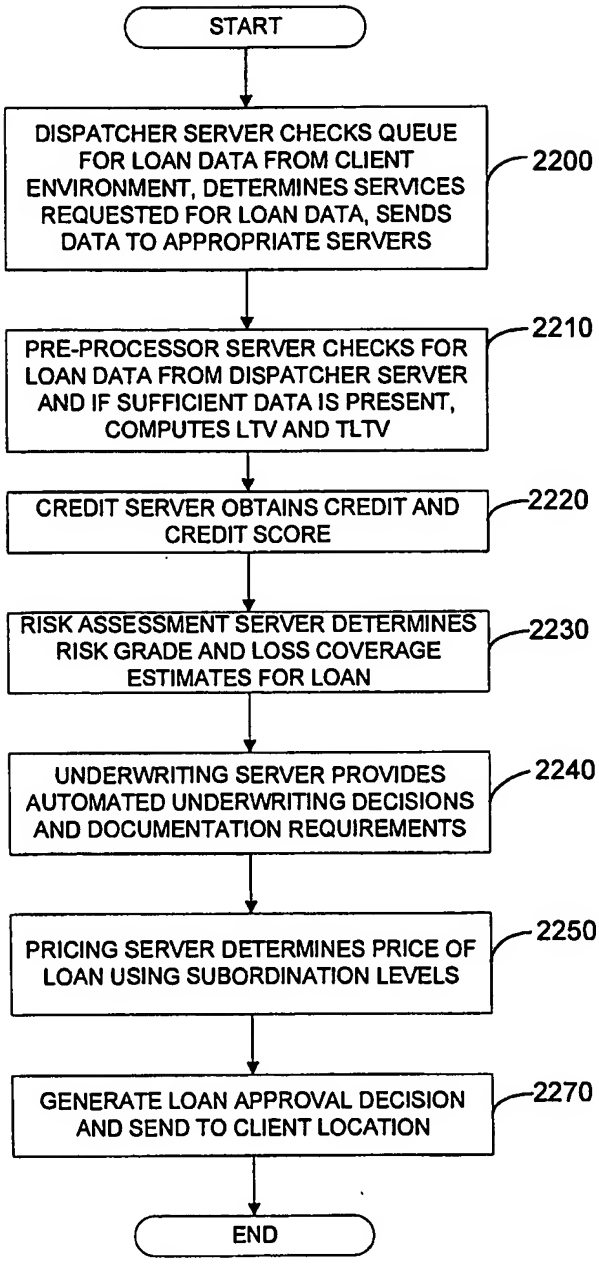
START
DISPATCHER SERVER CHECKS QUEUE FOR LOAN DATA FROM CLIENT ENVIRONMENT, DETERMINES SERVICES REQUESTED FOR LOAN DATA, SENDS DATA TO APPROPRIATE SERVERS
2200
PRE-PROCESSOR SERVER CHECKS FOR LOAN DATA FROM DISPATCHER SERVER AND IF SUFFICIENT DATA IS PRESENT, COMPUTES LTV AND TLTV
2210
CREDIT SERVER OBTAINS CREDIT AND CREDIT SCORE
2220
RISK ASSESSMENT SERVER DETERMINES RISK GRADE AND LOSS COVERAGE ESTIMATES FOR LOAN
2230
UNDERWRITING SERVER PROVIDES AUTOMATED UNDERWRITING DECISIONS AND DOCUMENTATION REQUIREMENTS
2240
PRICING SERVER DETERMINES PRICE OF LOAN USING SUBORDINATION LEVELS
2250
GENERATE LOAN APPROVAL DECISION AND SEND TO CLIENT LOCATION
2270
END

Fig. 22

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